

Consider the Language L of Strings of **length two or more**, defined over  $\Sigma = \{a, b\}$ , **beginning with and ending in same letters**.

The language L may be expressed by the following regular expression

$$a(a+b)^*a + b(a+b)^*b$$

It is to be noted that if the condition on the length of string is not imposed in the above language then **the strings a and b will then belong to the language**.

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Consider the Language L of Strings , defined over  $\Sigma = \{a, b\}$ , **beginning with and ending in different letters**.

The language L may be expressed by the following regular expression

$$a(a+b)^*b + b(a+b)^*a$$

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Consider the Language L of strings , defined over  $\Sigma = \{a, b\}$ , **containing double a**.

The language L may be expressed by the following regular expression

$$(a+b)^*(aa)(a+b)^*.$$

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Consider the language L of strings, defined over  $\Sigma = \{0, 1\}$ , **having double 0's or double 1's**, The language L may be expressed by the regular expression

$$(0+1)^*(00+11)(0+1)^*$$

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Consider the language L of strings, defined over  $\Sigma = \{a, b\}$ , **having triple a's or triple b's**. The language L may be expressed by RE

$$(a+b)^*(aaa+bbb)(a+b)^*$$

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Consider the **EVEN-EVEN** language, defined over  $\Sigma = \{a, b\}$ . As discussed earlier that **EVEN-EVEN** language can be expressed by the regular expression

$$(aa+bb+(ab+ba)(aa+bb)^*(ab+ba))^*$$